

Title (en)

Self-inflating tire with inlet control valve

Title (de)

Selbstaufpumpender Reifen mit einem Einlasssteuerungsventil

Title (fr)

Pneumatique autogonflant avec soupape de commande d'entrée

Publication

EP 2886372 A3 20150729 (EN)

Application

EP 14197270 A 20141211

Priority

US 201314108686 A 20131217

Abstract (en)

[origin: EP2886372A2] A self-inflating tire (12) comprising a tire cavity (40), first and second sidewalls (15) extending respectively from first and second tire bead regions to a tire tread region, and an air passageway (43) having an inlet end (42) and an outlet end (44) is disclosed. The air passageway (43) is composed of or established by a flexible material and is operative to open and close when the tire (12) rotates in contact with a contact area under its standard load and normal pressure. The tire (12) further comprises a regulator device or inlet control valve assembly (300). The regulator device or inlet control valve assembly (300) includes a housing (310) or regulator body. The housing (310) or regulator body has an interior chamber (320). A pressure membrane (550) is mounted in the interior chamber (320) and positioned to open and close an outlet port (330) provided in the interior chamber (320). The pressure membrane (550) is in fluid communication with the tire cavity pressure. The outlet port (330) of the regulator device or inlet control valve assembly (300) is in fluid communication with the inlet end (42) of the air passageway (43). The interior chamber (320) is in fluid communication with an outside air supply. The outlet end (44) of the air passageway (43) is in fluid communication with the tire cavity (40).

IPC 8 full level

B60C 23/12 (2006.01)

CPC (source: EP US)

B60C 23/123 (2020.05 - EP US); **B60C 23/135** (2020.05 - EP US); **Y10T 152/10495** (2015.01 - EP US)

Citation (search report)

- [XAY] EP 2565059 A2 20130306 - GOODYEAR TIRE & RUBBER [US]
- [X] EP 2565061 A1 20130306 - GOODYEAR TIRE & RUBBER [US]
- [Y] US 2013160931 A1 20130627 - SPORTELLI FRANCESCO [IT], et al
- [E] EP 2881269 A1 20150610 - GOODYEAR TIRE & RUBBER [US]

Cited by

EP2886375A3

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2886372 A2 20150624; EP 2886372 A3 20150729; EP 2886372 B1 20160914; BR 102014031134 A2 20160301; CN 104709004 A 20150617; CN 104709004 B 20170405; JP 2015117019 A 20150625; US 2015165839 A1 20150618; US 9233582 B2 20160112

DOCDB simple family (application)

EP 14197270 A 20141211; BR 102014031134 A 20141211; CN 201410780175 A 20141217; JP 2014254757 A 20141217; US 201314108686 A 20131217